Is self-reported physical activity associated with self-rated vision over time in older community-dwelling adults?

Ilona McMullan, Mark A. Tully, Brendan Bunting, Lee Smith

UK statistics suggest that approximately two million people are living with visual impairment (VI) of which approximately 80% are aged 60 years or over. Research suggests that older adults with VI have an increased risk of obesity which is a key risk factor for chronic disease such as a heart disease, diabetes, or stroke (Jones et al., 2009). Consequently, interventions for older adults with VI are an important health concern. The health benefits of physical activity (PA) in older adults are well established, 75% of older adults spend their waking time being sedentary and the PA levels of older adults with VI are lower than the older adults without VI. research exploring the association between PA and vision is limited, where in the main studies have been cross-sectional, and focused on socio demographic factors such as sex. Consequently, this study examined the relationship between PA and vision in a cohort of older adults (≥50 years), recruited as part of the TILDA study (n=8255 participants) over three waves of data a measure of self-reported PA over seven days (IPAQ) as well as self-rated vision. Regression models (cross lagged panel models) over three waves of data (across six years) adjusted for prespecified covariates based on existing literature were calculated. The mean age of the sample was 63.57 years. In the main, the sample included females (55%), people who were married (68%), people with no history of high blood pressure (64%), reported no history of, 93% had no,), diabetes (93%), or disability (88%), or eye disease (%). There were not statistically significant direct, indirect, or total effects found for the effects of PA level on vision, or of vision on PA level over a six-year period. PA was found to be statistically significant for PA, and vision was found to be statistically significant for vision over a six-year period. Further research is needed to understand the association between PA and vision using objectively measured PA and/or vision and within different populations over time.